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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,178	06/01/2001	James M. Tranquilla	11108/3	2924

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EXAMINER	
MARCHESCHI, MICHAEL A	
ART UNIT	PAPER NUMBER
1793	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/872,178	TRANQUILLA, JAMES M.	
	Examiner	Art Unit	
	Michael A. Marcheschi	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-18 and 20-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite as to the phrase "does not significantly chemically react" because the examiner is unclear as to what this encompasses. What is does this mean in terms of the content of any reaction?. What does "significantly" mean when used in the context of the claim.

Claim 15 is indefinite as to the phrase "does not substantively react chemically" because the examiner is unclear as to what this encompasses. What is does this mean in terms of the content of any reaction?. What does "substantively" mean when used in the context of the claim.

The other claims are indefinite because they depend on an indefinite claims.

Claims 1-13 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trerice in view of John and Crafton et al.

Trerice teaches in the entire document, specifically figure 1 and the claims, a method of reducing carbon levels in fly ash comprising exposing fly ash, in a chamber, to microwave energy (at the claimed frequency) in the presence of a ceramic media (conventional ceramic material-see column 7, line 38) while blowing an oxidizing source into said chamber. The temperature of the chamber is said to be 600 degrees C.

John teaches in column 1, lines 24-32 that the claimed initial and final carbon contents of fly ash are known.

Crafton et al. teaches in column 2, line 56-column 3, line 15 that is it conventional to use coarse inert particulate material (i.e. silica) as a bed for a combustion chamber in a system to remove carbon from fly ash, wherein the particulate material promotes combustion of the carbon in said fly ash (mixes with the fly ash).

The primary reference teaches a method which reads on the instant claims because it is the examiners position that the recitation of "ceramic media" in the above method encompasses the use of a particulate material that is carbon free because "media" is generally "particulate material" and "ceramic" is generally "carbon free". However, it is the examiners position that the use of a particulate material (silica) that is coarse (coarser than fly ash particles) is obvious to the skilled artisan because Crafton et al. teaches that the concept of using a particle material, as a bed, in a combustion chamber for reducing the carbon content in fly ash is conventionally known to optimize the combustion of the carbon in said fly ash, thus optimizing the carbon reduction process. The use of any material or concept known to optimize the carbon removal is clearly with the scope of the skilled artisan. This beneficial aspect provides the necessary motivation for the combination, as applied. In addition, since the primary reference states that ceramic media can be used as the bed and Crafton et al. teaches that is it conventional to use coarse inert particulate material (i.e. silica- this is a ceramic media) as a bed for a combustion chamber, the primary reference alone provides the necessary motivation to use an known media in the combustion chamber for carbon content removal in fly ashes. Although the limitation of instant step (c) might not be literally defined, it is the examiners position that once the carbon content is

reduced to a desired level, terminating the exposure is routine to the skilled artisan. The use of a monitoring system (claims 3 and 17) is obvious to the skilled artisan in order to monitor the temperature of the exposed fly ash during the above method, so as to determine when the fly ash reaches the desired temperature. The initial and final carbon contents (claims 5 and 11) are obvious because unprocessed fly ash generally contains the claimed amount of carbon (see John). The final carbon content is obvious depending on the desired end use of the fly ash. Since many applications require the fly ash to have a relatively low carbon content (below 3%-see John), the reduction of the carbon content to this level is obvious to the skilled artisan. The power level and duration times of claims 7 and 8 are obvious to the skilled artisan in order to maximize the microwave radiation of the fly ash, which would have been obvious through routine experimentation and optimization. In the alternative, although the reference does not literally define these limitations, this does not preclude the method of the reference from having these power levels and duration times. It is therefore the examiners position that since the reference fails to mention any specific power level and duration time (criticality), this (the absence of any such limitation) constitutes a broad teaching of these criteria, as long as the final carbon reduction is met. In view of this, it can be reasonably interpreted that the claimed limitations are encompassed by the broad teachings according to this reference in the absence of any evidence showing the contrary (criticality). The size of the fly ash (claim 9) is also obvious depending on the size desired for a particular application. In addition, the desired particle size is a function of the application and mere recitation of that size does not represent a patentable distinction over this reference to one of ordinary skill in the art, lacking evidence to the contrary. The limitations of claims 12 and 13 are obvious to the skilled artisan in order create a continuous

method, which is beneficial in terms of economics and time (the use of a continuous process will save time and money). The examiner acknowledges that the fly ash of the reference is not directly placed in a microwave reactor but it is the examiners position that since exposure to microwave radiation is known, the use of a microwave reactor, as the chamber of the reference, is obvious to the skilled artisan, absent evidence to the contrary. Finally, although the reference does recite "reducing ammonia levels" as in instant claim 15, no patentable distinction is seen to exist because the method is the same.

The examiner acknowledges applicants comment of the primary reference on pages 5-6 of the specification, but fails to see any patentable distinction between the reference and the claimed method in the absence of **comparative evidence**.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over all the claims of copending Application No. 10/543,409. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims. Although the limitation of instant claim 21 is not defined in the copending claims, the broad interpretation of no size relationship therein broadly encompasses any and all size relationships, including the relationship defined by instant claim 21.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant's arguments with respect to all the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MM

Michael A Marcheschi
Primary Examiner
Art Unit 1793